



U.S. Department of Energy
Energy Efficiency
and Renewable Energy

Bringing you a prosperous future where energy
is clean, abundant, reliable, and affordable

Site Description and Tour

U.S. Department of Energy
National Renewable Energy Laboratory
Request for Proposals DE-RP36-07GO97036

November 29, 2007



Framework for Today's Activities

Purpose

- Provide a brief introduction to and basic information on NREL facilities, operations, and future challenges

Scope

- Provide an overview presentation (will be available on IIPS)
- Bus tour of the South Table Mountain and National Wind Technology Center sites
- Brief walking tours of the Science and Technology Facility (STF), the Solar Energy Research Facility (SERF), and the Blade Test Facility
- Certain areas cannot be accessed due to group safety or proprietary business concerns

Questions

- All questions must be written and submitted to the Contracting Officer
- All questions and answers will be shared with all participants
- DOE will attempt to answer all questions at the end of the tour. Questions that cannot be answered on the tour will be posted on the Industry Interactive Procurement System



Ground Rules

- No electronic recording devices, cameras, etc., are allowed
- Participants are requested to avoid ad hoc conversations with DOE or NREL representatives to ensure fairness to all
- DOE will not discuss the business strategies or performance of the incumbent contractor



Major NREL Locations

- South Table Mountain Site
 - Owned by DOE
 - Primarily research and development
- National Wind Technology Center
 - Owned by DOE
 - Primarily research and development
- Denver West Facilities
 - Leased on behalf of DOE
 - Primarily administrative and support services
- Joyce Street Storage (Leased)
- ReFuel Facility (Leased)
- Washington D.C. Office (Leased)

South Table Mountain Site – Southwest View



South Table Mountain Site – Northwest View





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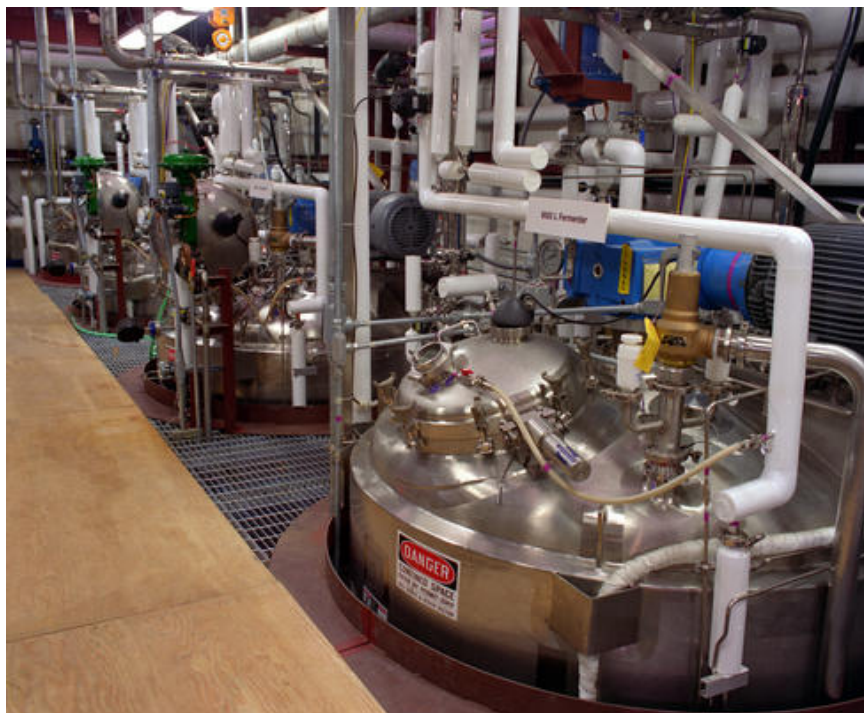


NATIONAL WIND TECHNOLOGY CENTER



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PROCESS DEVELOPMENT UNIT – ETHANOL PILOT FACILITIES



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WIND TURBINE DYNAMOMETER



BLADE TESTING FACILITIES



General Facilities and Infrastructure Information

- Relatively new campus
- Located in a growing metropolitan area
- No known areas of concern
- Served by local utilities
- Sensitivity to local concerns
- Conservation easement
- Publically accessible (with limitations)
- Expansion and recapitalization



Future Budgets and Status

- FY2008 Capital Budget Request
 - President's request ~ \$7M
 - Current House Mark ~ \$196M
 - Current Senate Mark ~ \$7M
 - No conference scheduled as of today
- FY2009 Capital Budget Request
 - President's Request
 - \$11M sustaining investment
 - \$13M recapitalization investment for STF and SERF
- Capital funding is always a major challenge



Capital Investment Management Drivers

- Maintain current investments
 - Real property standard: 2% Replacement Plant Value
 - Equipment standard: 50% portfolio asset life
- Consolidate all operations at DOE-owned assets
 - \$107M capital investment in FY 2007
- Safety and security
- Efficiency of operations



Large Projects Underway

Research Support Facility

- LEEDs Platinum Office Building
- Design build acquisition strategy managed by NREL
- \$72.9M Total Estimated Cost
- Fully funded
- Approximately 800 staff in 210,000+/- sf usable
- Request for Proposals issued December 2007
- Competition for best value
- Projected award in March 2008
- Estimated completion in December 2009

Integrated Biorefinery Facility

- Laboratory, process, and support space supporting bio-energy research and development
- Design build acquisition strategy managed by NREL
- \$20M Total Estimated Cost
- Fully funded
- Approximately 40 staff in 21,000+/- sf usable
- Request for Proposals issued January 2008
- Projected award in April 2008
- Estimated completion in August 2009



Other Significant Projects

- STM Site Infrastructure Upgrade
 - Realignment and installation of basic utilities
- Renewable Fuels Heating Plant
 - Displaces ~75% of Natural Gas Use in Winter
 - Paid for by Natural Gas Savings
 - Third-party financed project
- DOE/NREL Photovoltaic Array
 - Provides 750kW of photovoltaic energy for STM site
 - Third-party financed project



Ten-Year Site Plan

- Primary capital budgeting and planning document
- Description of current capital asset inventory
- Sustaining, Supporting, and Strategic Investments
- Updated annually
 - Always limited by budget schedule
 - Projects under consideration
- Available at NREL Public Reading Room:
<http://nrelpubs.nrel.gov/Webtop/ws/nich/www/public/SearchForm>



Environment, Safety, and Health

- **Program Goals**
 - ESH managed as a core institutional principle
 - Identify, assess, and mitigate hazards in all work activities
 - Reduce risk to lowest reasonable level
 - Respond to actual incidents when they do occur
- **Overall Program Framework**
 - Integrated Safety Management System
 - Necessary & Sufficient Standards
 - Environmental Management System
 - Environmental Assessments
 - Applicable DOE Directives
 - Administrative Policies, Procedures, and Programs



Safety and Health Focus Areas

- General industrial
- Electrical
- Hazardous production materials
- Fire
- Biohazards
- Lasers
- Material handling and transport
- Pressure safety
- Radiologic
 - Tracers
 - Sealed sources
- Construction safety
- Air quality
- Ergonomics
- Industrial hygiene
- Vehicles safety
- Confined space
- Hoisting and rigging
- Subcontractor management
- Office hazards



Environmental Focus Areas

- NEPA
- Storm Water Control
- Weed and Pest Control
- Wildlife Protection
- Pollution Prevention
- Waste Management
- Chemical Management



Future ES&H Challenges

- Multiple construction activities
- Stakeholder/neighbor relations
- National Wildlife Refuge (NWTTC)
- Mineral rights interest (NWTTC)
- Large quantity generator status
- NEPA review for off-site projects



ES&H Publically Available Documents

- Environmental Assessments (STM/NWTC)
- NREL Business and Operating Performance Report 2006
- NREL Annual Environmental Performance Report 2006
- Available at:
- http://www.eere.energy.gov/golden/Reading_Room.aspx



Security and Emergency Preparedness

Physical Security: Most Visible Security Measures, Supportive of Other Controls

- Property protection areas
- Barriers
- Access Control
- Alarms
- Protective Force Officers

Information Security (INFOSEC): High Threat = High Priority

- Unclassified, Proprietary and Official Use Only (OUO)
- Foreign Visits and Assignments



Security and Emergency Preparedness

- **Cyber Security**
 - The protection of systems
 - High Threat = High Priority
- **Personnel Security**
 - Supportive function
 - Limited security clearances on site
 - Background investigations
 - Homeland Security Presidential Directive (HSPD) -12



Security and Emergency Preparedness

- **Operations Security (OPSEC)**
 - The “Bed Rock” of all other security programs
 - The process of identifying critical information, analyzing threats and vulnerabilities, assessing risk and applying appropriate and prudent measures to deny access by unauthorized personnel
- **Emergency Preparedness**
 - Focus on initial response and continuity of operations
 - Emergency Planning and Drills
 - Emergency Operations Center
 - Emergency response from outside agencies